

NWRS/Fire
CMR 4.2
Mail Stop 60130

November 2, 2005

Memorandum

To: Regional Director, Region 6

From: Assistant Regional Director, National Wildlife Refuge System, Region 6
/s/ Richard A. Coleman

Subject: Charles M. Russell National Wildlife Refuge Burned Area Emergency Stabilization and Rehabilitation Plan Executive Summary

The Charles M. Russell National Wildlife Refuge (CMR) in Montana experienced a series of natural lighting-caused fires on the evening of September 9, 2005. The fires were pushed by strong erratic winds throughout the night and grew together to burn approximately 13,467 acres of CMR lands, Bureau of Land Management (BLM) lands, and private lands. Approximately 5,548 acres of Service Lands were burned; most of this burned during the first burning period.

In October 2005, the BLM, CMR Refuge Manager, and Refuge Fire Management Office compiled a request for Burned Area Rehabilitation (BAR) assistance. This request includes funding to replace several boundary fences on the Refuge and BLM, and for treating possible exotic/noxious weeds in the burned area. The Refuge is requesting one year of BAR funding to replace three miles of boundary fences (\$24,000), and two years of BAR funding for inventory and/or control of noxious weeds (\$11,200). The total amount requested for all rehabilitation work is \$35,200.

According to U.S. Fish and Wildlife Service policy, the Regional Director may approve BAR fund requests up to \$500,000 after concurrence by the Regional Fire Management Coordinator (RFMC) that the plan fits the technical definition for the use of rehabilitation funds.

The principal emergency concerns of the Refuge and proposed strategies for dealing with them are presented in the attached *Heartland Complex Fire Burned Area Rehabilitation Plan*. The proposed actions outlined in the plan and supporting documents meet the intent of the Interagency Burned Area Emergency Response Handbook and accomplish the following requirements:

1. Prescribe cost effective post-fire stabilization measures necessary to protect human life, property, and critical cultural and natural resources.
2. Promptly stabilize and prevent further degradation to affected resources on lands within the fire perimeter or downstream impact areas and mitigate damages caused by fire suppression operations in accordance with approved land management plans and policies, and all relevant Federal, State, and local laws and regulations.
3. Repair or improve lands unlikely to recover naturally from severe wildland fire damage by emulating historic or pre-fire ecosystem structure, function, diversity, and dynamics according to approved land management plans.
4. Restore or establish healthy, stable ecosystems, even if these ecosystems cannot fully emulate historic or pre-fire conditions as specified in approved land management plans.

After reviewing the CMR Rehabilitation Plan, we recommend that the request for \$35,200 BAR funds be approved subject to the following stipulations:

1. An electronic copy of the approved Rehabilitation Plan must be submitted to the Fire Management Branch, and the project must be entered into National Wildland Fire Operational Reporting System (NFPORS) prior to funding approval.
2. Only burned fences within the boundary of the Heartland Fire may be replaced with rehabilitation funding.
3. Fire-funded and non-fire-funded personnel may charge their base 8 hours and overtime to rehabilitation when performing rehabilitation activities. Because rehabilitation is a non-emergency activity, careful planning should eliminate any need for overtime.
4. Accountable equipment may not be purchased with 9262 funds.
5. Rehabilitation funding may be provided for up to three years; however, funding is approved one year at a time, and funds can only be expended on approved activities in the fiscal year for which they are approved. Additional years of funding for activities and treatments must be resubmitted for approval each fiscal year and must re-compete with rehabilitation requests from all Department of the Interior bureaus for available funding. Work on any treatments longer than three years after containment of the fire must be funded with agency base operating funds or some other funding source.
6. If approved, the Refuge will charge the costs of the approved projects against the BAR account: 61520-9262-XXXX, where "XXXX" is the project number established by the National Fire Management Branch.
7. All rehabilitation project charge codes will be closed at the end of each fiscal year. A new project charge code will be issued after receipt of all necessary plan amendments and annual accomplishment reports, and the appropriate NFPORS Rehabilitation and Restoration module entries are completed.
8. Refuge staff must monitor the effectiveness of all treatments and keep the RFMC informed of the progress and effectiveness of the BAR activities. An **Annual Accomplishment Report** must be prepared and distributed to the Regional Office and Fire Management Branch, and data entered into NFPORS by the Refuge. This Annual Accomplishment Report must contain information on treatment effectiveness and is required in order to continue to receive funding for an additional year.

9. To provide accountability, a standardized, interagency ***Final Accomplishment Report*** must be filed with the RFMC, and entered into NFPORS within 90 days of the completion of the project. The Final Accomplishment Report is a statement of what activities and treatments were actually completed. The report should contain, “*what worked well*”, “*what did not work as planned*”, and “*what was done to correct what did not work as planned*”. Information on what is required in the Annual and Final Accomplishment Reports is found at <http://www.fws.gov/fire/rehab/index.htm>.
10. All treatments and procurement activities should comply with applicable Service policy and standards, including wilderness guidelines and endangered species consultations.

This plan will have to compete for appropriated rehabilitation funding with other Department of the Interior requests using common criteria as established by the National Rehabilitation Coordinators in consultation with the Office of Wildland Fire Coordination. Availability of funding for the completion of this plan will depend upon its priority ranking.

Attachments:

1. Heartland Complex Fire Rehab Plan

RECOMMENDED BY:

/s/ Galen B. Green
Regional Fire Ecologist

October 24, 2005
Date

CONCUR:

/s/ David Carter
Regional Fire Management Specialist

October 24, 2005
Date

CONCUR:

/s/ James L. Kelton
Regional Fire Management Coordinator

October 27, 2005
Date

CONCUR:

/s/ Steve Berendzen
Refuge Supervisor, MT, WY, UT

October 27, 2005
Date

CONCUR:

/s/ Richard A Coleman
Regional Chief, NWRS

October 31, 2005
Date

APPROVED:

/s/ Sharon R. Rose
Acting Deputy Regional Director

October 31, 2005
Date

BURNED AREA REHABILITATION PLAN REVIEW AND APPROVAL

I. Project Leader approval that the Burned Area Rehabilitation Plan meets approved land management plan management objectives.

/s/ Barron Crawford

October 7, 2005

Project Leader, Charles M. Russell NWR

Date

II. Regional Fire Management Coordinator concurrence that the plan fits the technical definition for use of Rehabilitation finding.

/s/ James L. Kelton

October 31, 2005

Regional Fire Management Coordinator, Region 6

Date

III. Rehabilitation Funding Approval (check one box below):

Approved

Approved with Revision (see attached)

Disapproved

/s/ Sharon R. Rose

October 31, 2005

Acting Depute Regional Director, Region 6

Date

IV. Rehabilitation Funding Approval (check one box below):

Approved

Approved with Revision (see attached)

Disapproved

National Office

Date

Heartland Complex Fire
BURNED AREA REHABILITATION PLAN

UNIT: Charles M. Russell NWR

LOCATION: Lewistown, Fergus County, Montana

DATE: October 19, 2005

PREPARED BY: Mike Granger, CMR Fire Management Officer, Team Leader

Submitted By: /s/ Mike Granger
Mike Granger, FMO CMR NWR

Date: October 7, 2005

EXECUTIVE SUMMARY

Introduction

This Burned Area Rehabilitation Plan has been prepared in accordance with Department of the Interior and USFWS policy. This plan provides rehabilitation recommendations for all lands burned within the Heartland Fire perimeter and downstream impact areas including: public lands administered by the Charles M. Russell NWR and other jurisdictions if necessary. The primary objectives of the Heartland Fire Burned Area Rehabilitation Plan are:

- To repair or improve lands unlikely to recover naturally from severe wildland fire damage by emulating historic or pre-fire ecosystem structure, function, diversity, and dynamics according to approved land management plans.
- Restore or establish healthy, stable ecosystems, even if these ecosystems cannot fully emulate historic or pre-fire conditions as specified in approved land management plans.
- Repair or replace fire damaged minor operating facilities (e.g., campgrounds, interpretive signs and exhibits, shade shelters, fences, wildlife guzzlers, etc.)

This plan addresses rehabilitation treatments. The burned area was surveyed for resource damage by team members. General consensus is natural regeneration should adequately reclaim the affected areas if damaged fences are immediately replaced and/or repaired. This will allow resting of the burned areas from grazing which will promote nature regeneration. All damaged fences have been identified. Specifics are found in the attached document (Inventory of fire damaged fences on the CMR NWR with the Heartland Fire).

The ESR consisted of Mike Granger- FMO and Team Leader, Matt DeRosier and Paul Pallas – Operations Specialists, Joann Dullum- GIS Specialist/Wildlife Biologist, Jody Jones – Vegetation Specialist. The areas burned included riparian areas, grass-savanna ridges, ponderosa pine-juniper forest and sagebrush-grass zones. The team found extensive damage to the ponderosa-juniper areas. Approximately 40% of the pine appeared to be dead. Other zones had quick moving short duration fires of moderate intensity. Recovery should be excellent in these areas and natural regeneration will likely occur.

A summary of the costs by jurisdictions is in Part E. Appendix II contains the National Environmental Policy Act (NEPA) compliance documentation summary. Appendix III contains the Burned Area Rehabilitation Plan maps. Appendix IV contains photo documentation. Appendix V contains supporting documentation.

Fire Background

The Heartland Fire was a series of natural lightning caused fires which grew together to burn approximately 13,467 acres of CMR, BLM and private lands. The fire started on the evening of September 9, 2005 and was pushed by strong erratic winds throughout the night. Most of the acreage was burned during the first burning period. A Type 3 Incident Management Team was deployed to suppress the fire. The Type 3 organization managed the fire through September 15 at which time it was controlled and turned over to a Type 4 IC and put into patrol status.

Fire Damages and Threats to Human Safety and Natural and Cultural Resources

Two structures on private land and two structures on CMR were destroyed by the fire along with approximately 3 miles of CMR boundary fencing. The CMR structures cannot be replaced but the 3 miles of boundary fencing must be replaced as quickly as possible to prevent livestock from trespassing onto CMR and adversely impacting the burned area.

Charles M. Russell NWR Management Requirements

The area lies within the CMR National Wildlife Refuge and is adjacent to an important recreational area (Forchette Bay boat ramp and campground). The site is popular for boating and is used by visitors and local residents alike. Much of the burn is in a Proposed Wilderness Area as well.

Emergency Stabilization

Guidance for rehabilitation of wildfire areas is provided by the U.S. Fish and Wildlife Service Fire Management Handbook (Release: 7/17/00) and 095 FW3 (2/00). Guidance limits the use of fire rehabilitation funds to stabilize soils and biotic communities no later than two growing seasons, or a maximum of 3 years after initial plan approval. The stabilization of biotic communities should minimize unacceptable changes to ecosystem structure and function resulting from wildfire. Such stabilization allows for the establishment of shrubs, forbs, grasses, and trees if demonstrated to meet project objectives. Also allowed are efforts to minimize the establishment of non-native invasive species to prevent burned area degradation.

Rehabilitation

The following statements in approved Charles M. Russell National Wildlife Refuge management plans justify the proposed burned area rehabilitation treatments funded with Burned Area Rehabilitation funds.

“Habitat analysis indicates deciduous shrub communities are in short supply on the refuge, and historical accounts indicate shrubs were once more abundant than they are today. A combination of actions would be taken to improve the present situation.”

”Management actions would probably be adjustment in grazing, burning, and planting, in that order. Shrubs would be planted to reestablish a seed source for natural re-vegetation. (Charles M. Russell Final Environmental Impact Statement; Galen Buterbaugh, Regional Director, Region 6; August 1985.)”

PART A - FIRE LOCATION AND BACKGROUND INFORMATION

Fire Name	Heartland Complex
Fire Number	B6BS
Agency Unit	61520
Region	6
State	MT
County(s)	Phillips
Ignition Date/Cause	9-9-2005
Zone	
Date Fully Contained	9-15-2005
Jurisdiction Acres	
USFWS	5548
<i>BLM</i>	3763
<i>Private</i>	3656
State	500
Total Acres	13,467
Date Contained	9-15-2005

PART B - NATURE OF PLAN

Type of Action (check one box below)

<input checked="" type="checkbox"/>	Initial Submission
<input type="checkbox"/>	Amendment to the Initial Submission

PART C - REHABILITATION ASSESSMENT

Rehabilitation Objectives

- As practical and necessary, restore natural conditions to areas disturbed by fire suppression actions.
- Prevent the establishment of non-native invasive plants such as leafy spurge and Russian knapweed.
- Prevent degradation of unburned areas within the fire perimeter before spring green up by trespass livestock.
- Re-establish native shrubs and trees to prevent excess erosion and site degradation.

PART D - TEAM ORGANIZATION, MEMBERS, AND RESOURCE ADVISORS

I. Burned Area Emergency Response Team Members:

Position	Team Member (Agency)
Team Leader	Mike Granger (FWS)
Operations	Paul Pallas/Matt DeRosier (FWS)
NEPA Compliance & Planning	Mike Granger (FWS)
Vegetation Specialist	Jody Jones (FWS)
Wildlife Biologist	Joann Dullum (FWS)
GIS Specialist	Joann Dullum (FWS)

III. Resource Advisors:

Name	Affiliation
Matt DeRosier	Charles M. Russell NWR, Sand Creek Station Manager

PART E - SUMMARY OF ACTIVITIES AND COSTS

The summary of activities and cost table below identifies rehabilitation costs charged or proposed for funding from subactivity 9262 funding sources.

REHABILITATION ACTIVITIES COST SUMMARY TABLE – Heartland Complex Fire

Spec #	Title	Unit	Unit Cost	# of Units	Work Agent	Cost
1	Replace three miles of boundary fencing	mile	\$ 8,000	3	SC	\$24,000
2	Invasive weed surveys and control	year	5,600	2	FA	\$11,200
TOTAL COST						\$35,200

Work Agent: CA=Coop Agreement, FA=Force Account, G=Grantee, P=Permitee, SC=Service Contract, TSP=Timber Sales Purchaser, V=Volunteer

PART F - INDIVIDUAL SPECIFICATION

TREATMENT/ACTIVITY NAME	Replace Fence	PART E SPECIFICATION #	1
NFPORS TREATMENT CATEGORY*		FISCAL YEAR(S) (list each year):	FY2006
NFPORS TREATMENT TYPE *		WUI? Y / N	N
IMPACTED COMMUNITIES AT RISK	None	IMPACTED T&E SPECIES	None

* See NFPORS Restoration & Rehabilitation module - Edit Treatment screen for applicable entries.

TREATMENT/ACTIVITY NAME	Monitor and control invasive weeds	PART E SPECIFICATION #	2
NFPORS TREATMENT CATEGORY*		FISCAL YEAR(S) (list each year):	FY2006, FY2007
NFPORS TREATMENT TYPE *		WUI? Y / N	N
IMPACTED COMMUNITIES AT RISK	None	IMPACTED T&E SPECIES	None

WORK TO BE DONE (describe or attach exact specifications of work to be done):

<p>Number and Describe Each Task:</p> <p>A. General Description: 1) Replace three miles of CMR boundary fence destroyed by the Heartland Complex fire. 2) Monitor invasive weeds and control by hand pulling and chemicals where necessary. Monitoring will be via helicopter or fixed wing aircraft.</p> <p>B. Location/(Suitable) Sites: Heartland Complex Fire on CMR NWR</p> <p>C. Design/Construction Specifications: Fence design and standards are per FWS specifications. Weed inventory and control will be per attached document.</p> <p>D. Purpose of Treatment Specifications: To prevent trespass cattle from entering the Refuge and negatively impacting the burn area. Prevent invasion of noxious weeds.</p> <p>E. Treatment Effectiveness Monitoring Proposed: No monitoring will be required if fencing is completed prior to cattle being released on adjacent lands. Weeds will be monitored for two years.</p>

LABOR, MATERIALS AND OTHER COST:

PERSONNEL SERVICES: (Grade @ Cost/Hours X Hours X # Fiscal Years = Cost/Item): Do not include contract personnel costs here (see contractor services below).	COST / ITEM
GS-9 at \$28/hour x 90 hours x 2 years = 5,000	5,000
TOTAL PERSONNEL SERVICE COST	5,000
EQUIPMENT PURCHASE, LEASE AND/OR RENT (Item @ Cost/Hour X # of Hours X #Fiscal Years = Cost/Item): Note: Purchases require written justification that demonstrates cost benefits over leasing or renting.	COST / ITEM
Bell 206 helicopter. 2 hours at \$1200.00 per hour x 2 years	\$4800
TOTAL EQUIPMENT PURCHASE, LEASE OR RENTAL COST	\$4,800
MATERIALS AND SUPPLIES (Item @ Cost/Each X Quantity X #Fiscal Years = Cost/Item):	COST / ITEM
Plateau Herbicide at \$200/gallon x 1 gallon x 2 years	\$400.00

TRAVEL COST (Personnel or Equipment @ Rate X Round Trips X #Fiscal Years = Cost/Item):	COST / ITEM
Diesel fuel \$500 x 2 years	1000
TOTAL TRAVEL COST	1000
CONTRACT COST (Labor or Equipment @ Cost/Hour X #Hours X #Fiscal Years = Cost/Item):	COST / ITEM
Standard fencing contract is \$6,000 per mile. Helicopter time to sling materials along the boundary will be \$2,000 per mile.	\$24,000
TOTAL CONTRACT COST	\$24,000

SPECIFICATION COST SUMMARY

FISCAL YEAR	PLANNED INITIATION DATE (M/D/YYYY)	PLANNED COMPLETION DATE (M/D/YYYY)	WORK AGENT	UNITS	UNIT COST	PLANNED ACCOMPLISHMENTS	PLANNED COST
FY_06_	10-31-2005	5-1-2006	SC	mile	\$8,000	3 miles	\$24,000
FY_06_	4-1-2006	9-1-2006	FA	year	\$5600		\$5,600
FY__	4-1-2007	9-1-2006	FA	year	\$5600		\$5,600
						TOTAL	\$35,200

Work Agent: C=Coop Agreement, F=Force Account, G=Grantee, P=Permittees, S=Service Contract, T=Timber Sales Purchaser, V=Volunteer

SOURCE OF COST ESTIMATE

1.	Estimate obtained from 2-3 independent contractual sources.	
2.	Documented cost figures from similar project work obtained from local agency sources.	x
3.	Estimate supported by cost guides from independent sources or other federal agencies	x
4.	Estimates based upon government wage rates and material cost.	
5.	No cost estimate required - cost charged to Fire Suppression Account	

P = Personnel Services, E = Equipment M = Materials/Supplies, T = Travel, C = Contract, F = Suppression

RELEVANT DETAILS, MAPS AND DOCUMENTATION INCLUDED IN THIS REPORT:

Heartland Fire Map, Heartland Fence Map.
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TOTAL COST BY JURISDICTION

JURISDICTION	UNITS TREATED	COST
Charles M. Russell NWR	3 miles of fence	24,000
Charles M. Russell NWR	2 years of weed control	11,200
	TOTAL COST	35,200

PART H - CONSULTATIONS

Charles M. Russell NWR staff.

HEARTLAND FIRE RESOURCE DAMAGE ASSESSMENT REPORT

I. Objectives

To access the damage to CMR resources burned during the Heartland Complex. It was found that three miles of fence were damaged or destroyed during this fire. The fences were not damage/destroyed by suppression activities.

II. Observations

A. Background Information

Boundary fences are a key element for the burned area to regenerate by allowing CMR to rest the burned area for two to three growing seasons. This will promote natural regeneration of native grass, shrubs and forbs.

B. Reconnaissance Method

Helicopter flight was used to map and survey the fences within the Complex. On site evaluation were also performed.

C. Findings

The area will regenerate with a rest period, the key to this is the fences, those destroyed need to be rebuilt as soon as possible.

III. Recommendations

Rebuild the fences which will allow the burn area to rest from cattle grazing.

Specification Monitoring. Monitor and control invasive weed species where necessary.

IV. Consultations

CMR Staff

V. References

Charles M. Russell NWR Environmental Impact Statement, 1985.

APPENDIX II - ENVIRONMENTAL COMPLIANCE

Federal, State, and Private Lands Environmental Compliance Responsibilities

All projects proposed in the Heartland Complex Burned Area Rehabilitation Plan that are prescribed, funded, or implemented by Federal agencies on Federal, State, or private lands are subject to compliance with the National Environmental Policy Act (NEPA) in accordance with the guidelines provided by the Council on Environmental Quality (CEQ) Regulations (40 CFR 1500-1508); Department of the Interior and U.S. Fish and Wildlife Service Fire Management Handbook (Release 7/17/00) and 095 FW3, 3.9 B,C. This Appendix documents the Burned area emergency response team considerations of NEPA compliance requirements for prescribed rehabilitation and monitoring actions described in this plan for all jurisdictions affected by the Heartland Complex Fire.

Related Plans and Cumulative Impact Analysis

Charles M. Russell National Wildlife Refuge Environmental Impact Statement (1985) was reviewed and it was determined that actions proposed in the Heartland Complex ESR Plan within the boundary of the Charles M. Russell National Wildlife Refuge are consistent with the management objectives established in the FEIS.

Cumulative Impact Analysis

Cumulative effects are the environmental impacts resulting from the incremental impacts of a proposed action when added to other past, present, and reasonably foreseeable future actions, both Federal and non-Federal. Cumulative impacts can result from individually minor, but collectively significant actions taking place over a period of time. The rehabilitation treatments for areas affected by the Heartland Complex Fire, as proposed in the Heartland Complex Fire Burned Area Rehabilitation Plan; do not result in an intensity of impact (i.e. major ground disturbance, etc.) that would cumulatively constitute a significant impact on the quality of the environment. The treatments are consistent with the above jurisdictional management plans and associated environmental compliance documents and categorical exclusions listed below.

Applicable and Relevant Categorical Exclusions

The individual actions proposed in this plan for Heartland Complex Fire are Categorically Excluded from further environmental analysis as provided for in DM 516, DM 6, Appendix 1, 1.4 (4), (5), (6), (9), and (11).

Statement of Compliance for the Fire Burned Area Rehabilitation Plan.

This section documents consideration given to the requirements of specific environmental laws in the development of the Heartland Complex Fire Burned Area Rehabilitation Plan. Specific consultations initiated or completed during development and implementation of this plan are also documented. The following executive orders and legislative acts have been reviewed as they apply to the Heartland Complex Fire Burned Area Rehabilitation Plan:

- National Historic Preservation Act (NAPA).
- Executive Order 11988. Flood plain Management.
- Executive Order 11990. Protection of Wetlands.
- Executive Order 12372. Intergovernmental Review.
- Executive Order 12892. Federal Actions to Address Environmental Justice in Minority and Low-income Populations.
- Endangered Species Act.
- Secretarial Order 3127. Federal Contaminated
- Clean Water Act.
- Clean Air Act.

CONSULTATIONS

- Charles M. Russell NWR staff

NEPA Checklist: If any of the following exception applies, the Burned Area Rehabilitation Plan cannot be Categorically Excluded and an Environmental Assessment (EA) is required.

(Yes) (No)

- Adversely affect Public Health and Safety
- Adversely affect historic or cultural resources, wilderness, wild and scenic rivers aquifers, prime farmlands, wetlands, floodplains, ecologically critical areas, or Natural Landmarks.
- Have highly controversial environmental effects.
- Have highly uncertain environmental effects or involve unique or unknown environmental risks.
- Establish a precedent resulting in significant environmental effects.
- Relates to other actions with individually insignificant but cumulatively significant environmental effects.
- Adversely effects properties listed or eligible for listing in the National Register of Historic Places
- Adversely affect a species listed or proposed to be listed as Threatened or Endangered.
- Threaten to violate any laws or requirements imported for the "protection of the environment" such as Executive Order 11988 (Floodplain Management) or Executive Order 11990 (Protection of Wetlands).

National Historic Preservation Act

Ground Disturbance:

- None
- Ground disturbance did occur and an archeologist survey, required under section 110 of the NHPA will be prepared. A report will be prepared under contract as specified by the Burned Area Rehabilitation Plan.

A NHPA Clearance Form:

- Is required because the project may have affected a site that is eligible or on the national register. The clearance form is attached. SHPO has been consulted under Section 106 (see Cultural Resource Assessment, Appendix I).
- Is not required because the Burned Area Rehabilitation Plan has no potential to affect cultural resources (initial of cultural resource specialist).

Other Requirements

(Yes) (No)

- Does the Burned Area Rehabilitation Plan have potential to affect any Native American uses? If so, consultation with affiliated tribes is needed.
- Are any toxic chemicals, including pesticides or treated wood, proposed for use? If so local agency integrated pest management specialists must be consulted. (Treated brace posts will be used to replace same).

Attachment to Heartland Fire Burned Area Emergency Stabilization and
Rehabilitation Plan

Invasive Species Inventory and Treatment Protocol

September 30, 2005

Background:

The Heartland fire was a series of natural lightning caused fires which grew together to burn approximately 13,467 acres of CMR, BLM and private lands. The fire started on the evening of September 9, 2005 and was pushed by strong erratic winds throughout the night. Most of the acreage was burned during the first burning period. A Type 3 Incident Management Team was deployed to suppress the fire. The Type 3 organization managed the fire through September 15 at which time it was controlled and turned over to a Type 4 IC and put into patrol status.

Approximately 5,548 acres of the Iron Stake Ridge on the Charles M. Russell NWR burned during the fire. These areas now have an increased likelihood of being colonized by exotic plant species. Below you will find the refuge protocol for the inventory and control of any exotic plant species found in the burn area on the refuge.

Treatment Protocol:

Treatment Goal: Prevent aggressive growth, as well as re-growth/re-establishment of undesirable exotic plant species such as Canada thistle (*Cirsium arvense*), leafy spurge (*Euphorbia esula*) and Russian knapweed (*Acroptilon repens*).

Inventory Method: During the first year of monitoring, the burn area on the refuge (see attached map) will be inventoried frequently for the existence of exotic plant species. Monitoring will include walking transects in the burn area and aerial reconnaissance in conjunction with other refuge aerial surveys. The areas where exotics are found will be mapped and treated appropriately.

Species Expected: Canada thistle
Leafy spurge
Russian knapweed

Treatments:

Hand Pulling: In areas of limited exotic growth or near water sources, hand pulling will be utilized and the effects will be monitored for

success. If successful, the areas will continue to be monitored and treated as necessary.

Chemical Application: In areas of dense plant growth where hand pulling would be ineffective, the use of chemical spraying will occur. The chemicals and application rates the refuge anticipates using is listed in the table below.

SPECIES	CHEMICAL	APPLICATION RATE/acre
Canada thistle	Curtail	2 quarts
Leafy spurge	Plateau	8 oz
Russian knapweed	Tordon 22K	3 quarts

Annual Report:

After each field season, results from the monitoring and treatment of exotic plant species found where the Heartland fire occurred will be reported to the Region 6 Fire Ecologist in Denver, Colorado. The report will include an updated map with the locations and types of exotic plants treated, as well as, control methods. Types and amounts of chemicals used for control will be included in the report. Finally, the report will include expectations for the upcoming field season in relation to the previous season and considerations for improving control methods in the future.